



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

649.5011
Job Sheet 165690



Part No: 649.5011

Job Qty: 8 ea

Part Name: Deflector



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/2/17

Job Tracking No:

Due Date: 10/31/17

Created By: Linda Lacelle

Type: Stock

Description:

Note: DWG REV D IPP REV: A NEW ISSUE RQ VERIFIED BY:JLM

Ship Via:

Bill of Materials

Part/Part Name	Part Note	Serial No	Quantity	Location
649.5011 Deflector	DWG REV D IPP REV: A NEW ISSUE RQ VERIFIED BY:JLM		0.000	
649.5011E Deflector	DWG REV D		0.000	

Job Routing

Op No	Operation	Qty	Due Date	Standard		Workcenter/Supplier	
				Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
90	Start up Operation	8 Ea	10/30/17	0.00	0.00	Start up container	
100	Bandsaw	8 pcs	10/30/17	0.00	0.00	Bandsaw1	
110	CNC Vertical Machining	8 pcs	10/31/17	0.00	3.14	HAAS 1	
120	QC	8 pcs	10/31/17	0.00	0.00	QC2	
130	QC	8 pcs	10/31/17	0.00	0.00	QC8	
140	Outsource	8 pcs	10/31/17	0.00	0.00	Outsource4	
150	Packaging	8 pcs	10/31/17	0.00	0.00	Packaging2	
160	QC	8 pcs	10/31/17	0.00	0.00	QC5	
180	Packaging	8 pcs	10/31/17	0.00	0.00	Packaging3	
190	QC21-SA	8 Ea	10/31/17	0.00	0.00	QC21	

Part Op 100 - Cut Blank at 9.13"

Descriptions: 110 - 1-Machine per folio FB219 DWG REV: _____ FOLIO REV: _____ 2- deburr and break all sharp edges

140 - Issue P/O to ATG: 38447 AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N Certification of Conformity is required

180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

NOV 22 2017

13
9-89

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	649.5011E	6	0	0	0

Part Specifications

Specifications could not be found.



S014906



Deflector

PART NO: 649.5011
Revision:
Operation: Outsource
Change No:

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Mfg Date: 11/28/17

Job No: 165690



S009381



Deflector

PART NO: 649.5011
Revision:
Operation: Start up Operation
Change No:

Dart Aerospace Ltd

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Mfg Date: 11/13/17

Job No: 165690

Work Order ID 165690

Monday, August 28, 2017 12:46:24 PM

165690

Page 1

Item ID: 649.5011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Deflector

Start Date: 9/7/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 10/3/2017 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

DAS

21

Date:

AUG 30 2017

Tooling:

Date:

QC:

9-89

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

649.5000

D

100

0.00

100

BAND SAW

8

SBL 17/11/13

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 9.13"

110

1.29

110

HAAS CNC VERTICAL MACHINING #1

8

SBL 17/11/13

HAAS I

Memo

1.05

HAAS CNC vertical machine #1

1-Machine per folio FB219

DWG REV: _____

FOLIO REV: _____

2- deburr and break all sharp edges

Monday, August 28, 2017 12:46:24 PM

Page 2

[illegible]

Monday, August 28, 2017 12:46:24 PM

Item ID: 649.5011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Deflector

Stop *NS2*

Start Date: 9/7/2017 **Start Qty:** 8.00

8

Cust Item ID:

Required Date: 10/3/2017 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID**Tool #****Plan
Code**

**Accept
Qty**

Reject Qty

Reject
Number

**Insp.
Stamp**

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

0.00

Outsource4

Memo

Issue P/O to ATG:

AS PER MPP-172 SECTION 2.1,
HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2
AS PER MPP-172 SECTION 4.2,
PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N

Certification of Conformity is required

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

0.00

Packaging

Memo

Packaging

Monday, August 28, 2017 12:46:24 PM

165690

Page 4

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Deflector

Start Date: 9/7/2017 **Start Qty:** 8.00 ***8***

Cust Item ID:

Required Date: 10/3/2017 **Req'd Qty:** 8.00 ***Q***

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

180

Identify as per dwg & Stock Location:_____

0.00

180

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

Picklist Print

Page 1

Monday, August 28, 2017 12:46:27 PM

Work Order ID: 165690

165690

Parent Item: 649.5011

649 5011

Parent Item Name: Deflector

Start Date: 9/7/2017

Required Date: 10/3/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV: A NEW ISSUE RQ VERIFIED BY:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
649.5011E		Manufactured	No			100	f	120.0000	0.7608	6.406737			

649 5011F

Deflector

Location

Loc Qty

Loc Code

MAT035

120

92312

120

6.08

SBL 17/11/13

FIRST ARTICLE INSPECTION CHECKLIST

Measured by: SBL 01		Audited by: F.K.		Preliminary Approval:	
Date: 17/11/13		Date: 17-11-15		Date:	

Rev	Date	Change	Revised by	Approved
A	14.06.26	New Issue	KJ	M

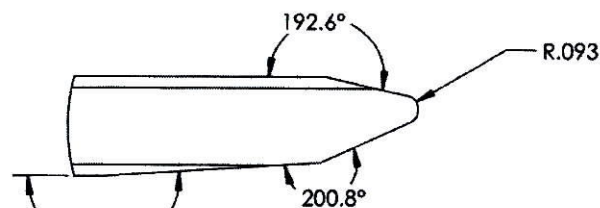
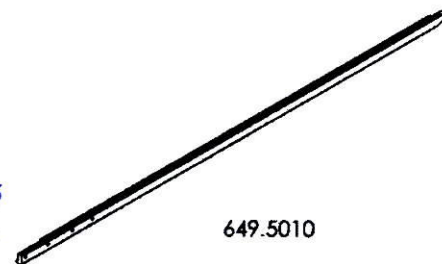
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NOTES: UNLESS OTHERWISE SPECIFIED

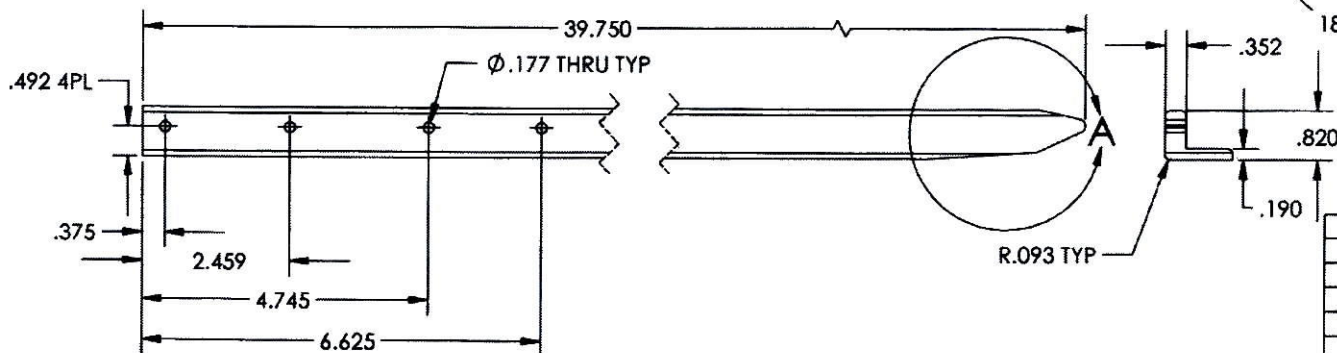
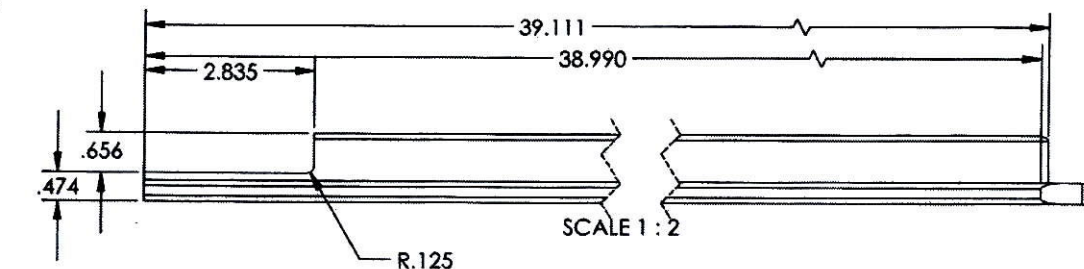
1. PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.
2. FINISH: ANODIZE IAW MPP-172 SECTION 2.1;
PRETREAT IAW MPP-172 SECTION 3.1;
PRIME IAW MPP-172 SECTION 4.2; 1-2 MIL MAX.
3. DE BURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION, 12 PT. CENTURY GOTHIC.
5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.
6. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5010 DEFLECTOR.SLDPRG, LAST MODIFIED 04-16-12.
7. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5012 DEFLECTOR.SLDPRG, LAST MODIFIED 11-03-11.
8. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5013 DEFLECTOR.SLDPRG, LAST MODIFIED 04-16-12.
9. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5014 DEFLECTOR.SLDPRG, LAST MODIFIED 04-04-17.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 165690MCS
170810

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
N/C	INITIAL RELEASE	11-03-11	P. BRAVO
A	INCORPORATED ECH 05422 AND 05478	04-16-12	P. BRAVO
B	INCORPORATED ECH 05504	05-02-12	P. BRAVO
C	INCORPORATED ECH 05521	05-22-12	P. BRAVO
D	INCORPORATED ECH 04240, 05450 & 05730	04-16-17	P. BRAVO



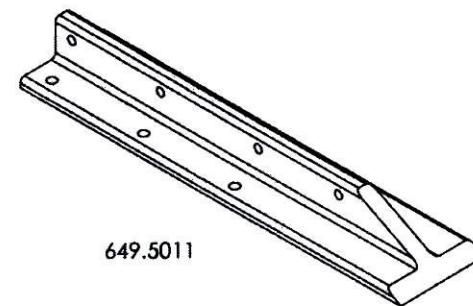
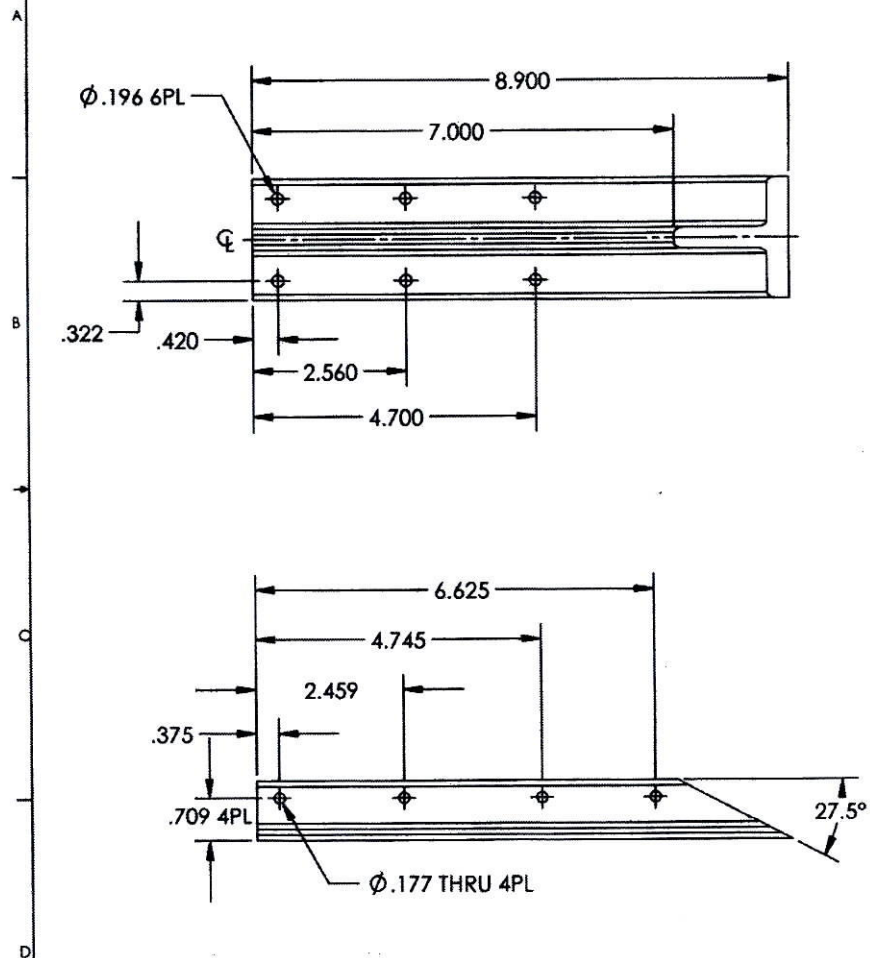
DETAIL A
SCALE 1:1



5	649.5014	DEFLECTOR	△	△△
4	649.5013	DEFLECTOR	△	△△
3	649.5012	DEFLECTOR	△	△△
2	649.5011	DEFLECTOR	△	△
1	649.5010	DEFLECTOR	△	△△
FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

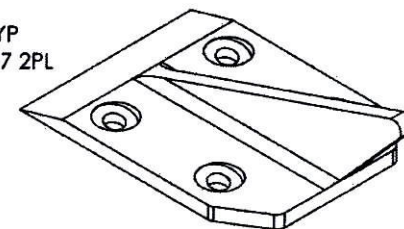
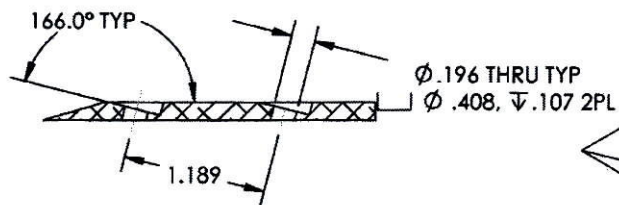
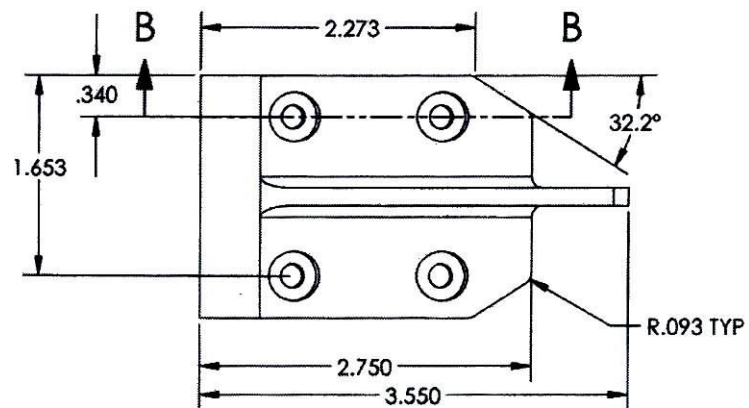
QTY	ORIGINAL DATE 2010-10-19	PARTS LIST	
NEXT ASSY (S)	11-03-11		
649.4700	DRAWN BY: P. BRAVO		
	CHECKED BY: P. BRAVO		
	CONTRACT NO.		
	UNLESS OTHERWISE SPECIFIED: (DIMENSIONS ARE IN INCHES) TOLERANCES ARE: 2 PLACE DECIMALS .003 3 PLACE DECIMALS .010 ANGLES .5°		
DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300		DEFLECTOR	
REV	DATE	QTY	REV
B	07/26/16	649.5000	D
SCALE: NONE		SHEET 1 OF 5	

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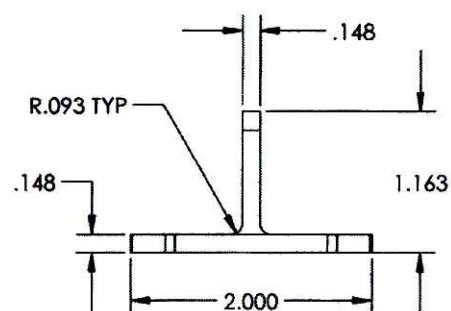
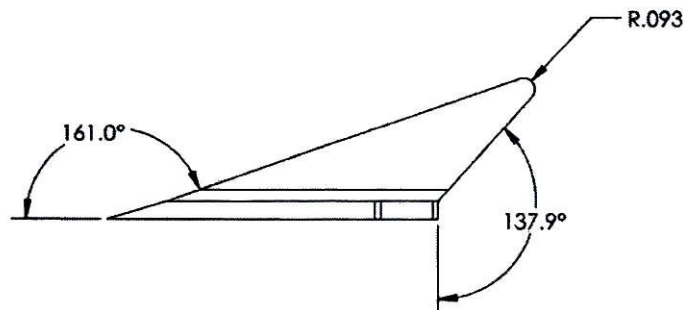


ORIGINAL DATE 11-03-11		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY A. QUAN	CHECKED BY P. BRAVO	DART AEROSPACE APCAL INDUSTRIES INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAVO		DEFLECTOR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.2°		SHEET NO. B 07426	REV. D
SCALE NONE		DWG. NO. 649.5000	SHEET 2 OF 5

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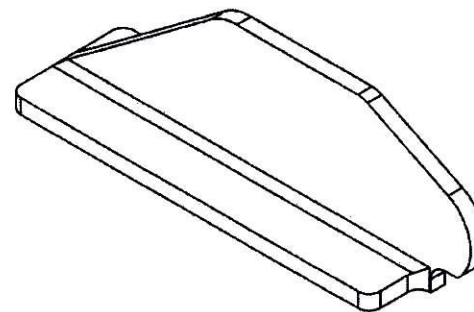
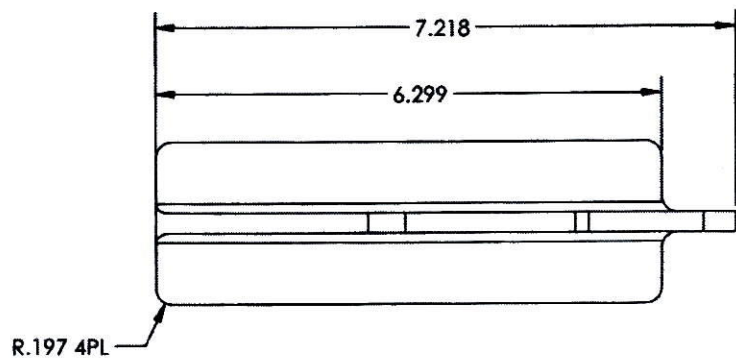


649.5012

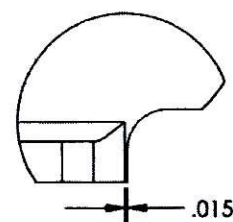
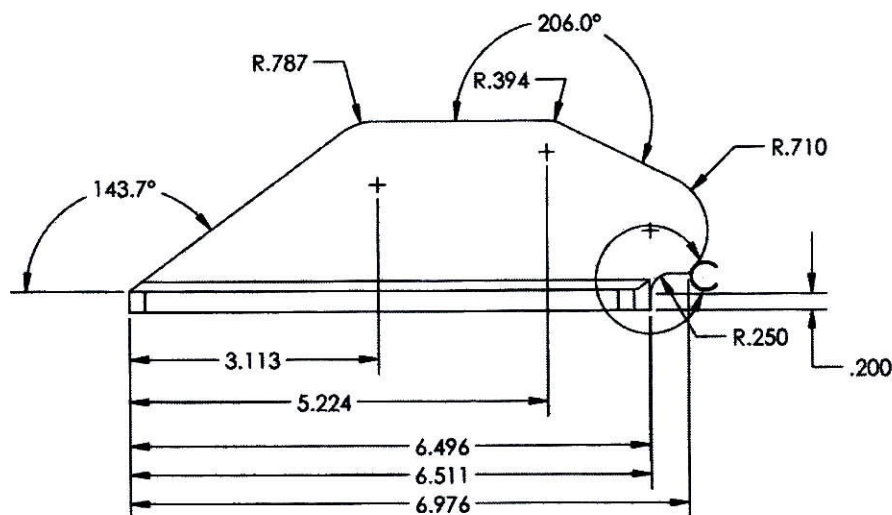


ORIGINAL DATE 05-01-11		3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-3300	
DRAWN BY A. GUAN	CHECKED P. BRAVO	DEFLECTOR	
DRAWING APPROVAL P. BRAVO 05-15-11		APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± 3°		SHEET 8	REV. D
CAGE CODE 07M76		SHEET 3 OF 5	

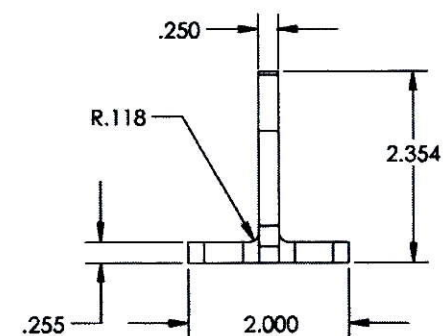
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649.5013

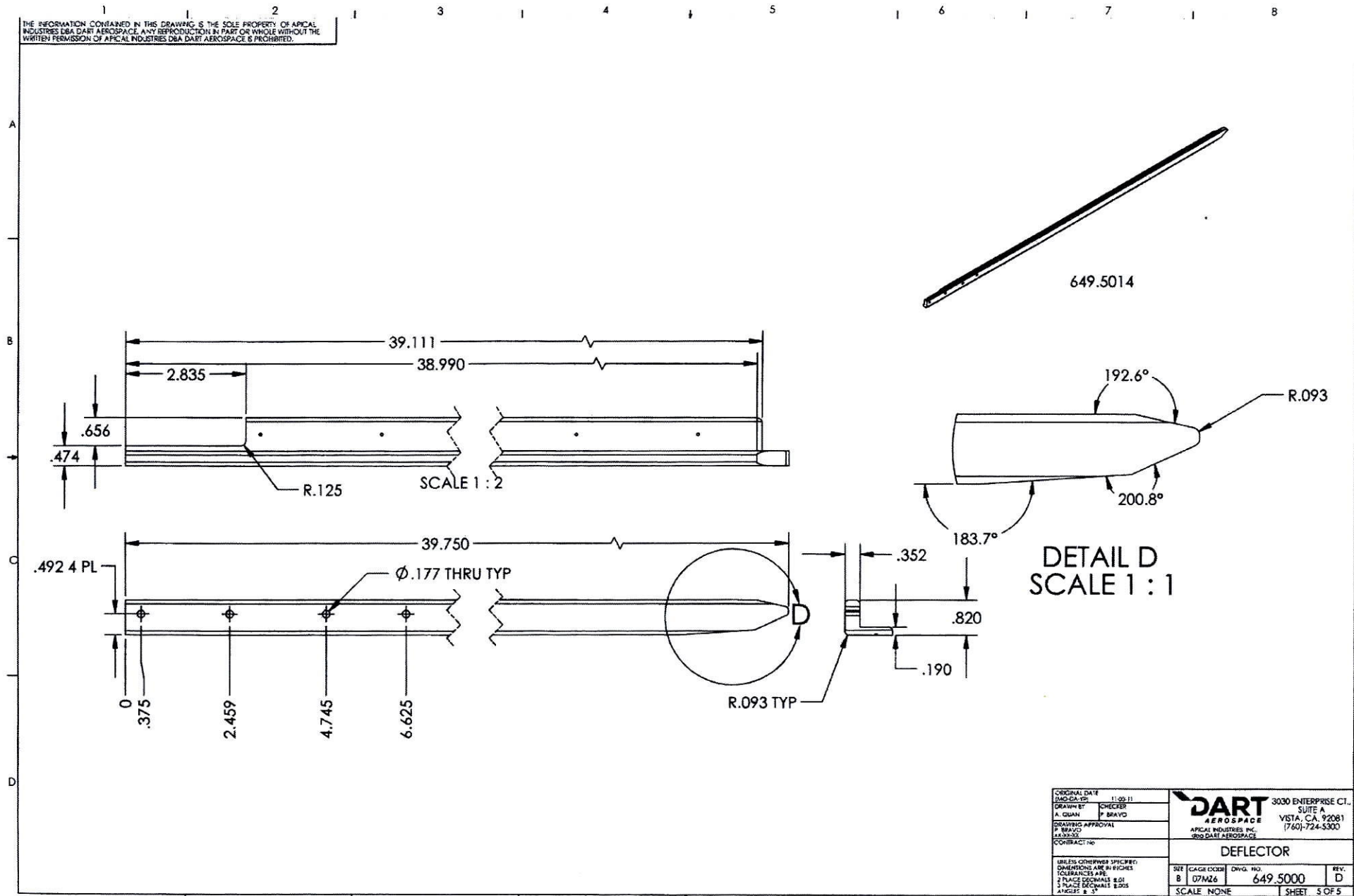


DETAIL C
SCALE 2:1.5



ORIGINAL DATE 11-03-11	 3030 ENTERPRISE CT SUITE A VISTA, CA. 92081 (760) 724-5300			
DRAWN BY A. QIAN	DESIGNED BY P. BRAVO			
DRAWING APPROVAL P. BRAVO				
CONTRACT NO.				
DEFLECTOR				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .5°	SER B	GAGE CODE 07M26	DRG. NO. 649.5000	REV. D
	SCALE NONE	SHEET 4 OF 5		

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES D&A DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES D&A DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE: 11/05/11		DART AEROSPACE		3030 ENTERPRISE CT., SUITE A	
DRAWN BY: A. QUAN		CHECKED: P. BRAYO		VISTA, CA. 92081	
DRAWING APPROVAL: P. BRAYO		APICAL INDUSTRIES INC.		(760)-724-5300	
CONTRACT NO:		DEFLECTOR			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm 3^\circ$		SHEET	8	DWG. NO.	649.5000
		SCALE	NONE	REV.	D
				SHEET 5 OF 5	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038447

Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalonde, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO038447

PO Date: 11/22/17

Due Date: 11/28/17

**Purchase Order
Revision:**

Revision Date: 11/28/17

Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments: PLEASE ADVISE IF POSSIBLE TO GET ALL
PART ANODIZE FOR NEXT MONDAY,
PARTS REQUIRED ASAP

Items

Line Item	Job	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	168640	649.4811	-	Clip ISSUE P/O: HARD ANODIZE COLOR BLACK/PRIME AS PER DWG 649.4811		Firmed	11/28/17	20 pcs	0 pcs	20 pcs	\$13.60/pcs	\$272.00
Line Item Note RUSH ORDER REQUIRED FOR NEXT MONDAY.												
2	165690	649.5011	-	Deflector Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PRIME AS PER DWG 649.5011		Firmed	11/28/17	8 pcs	0 pcs	8 pcs	\$16.50/pcs	\$132.00
3	165556	649.5013	-	Deflector Issue P/O to ATG: HARD ANODIZE COLOR BLACK, PRIME AS PER DWG 649.5013		Firmed	12/4/17	8 pcs	0 pcs	8 pcs	\$17.60/pcs	\$140.80
4	168578	RBD29905-9	-	Pulley -Issue P/O to ATG : PO -ANODIZE COLOR RED, PER IAW MIL-A- 8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required		Firmed	11/28/17	7 pcs	0 pcs	7 pcs	\$19.63/pcs	\$137.41
5	166219	RBEM210V4000103-1	-	Base -Issue P/O to ATG: -ANODIZE COLOR CLEAR, PER IAW MIL- A-8625F TYPE 2 CLASS 1 WATER SEAL - Certificate of Conformity is required		Firmed	11/28/17	1 pcs	0 pcs	1 pcs	\$13.35/pcs	\$13.35



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914187

Date: 28-Nov-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
20 ea	Part: 649.4811 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22030		Rev: B PO: PO038447 Line: 1
8 ea	Part: 649.5011 Deflector Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 22031		Rev: D PO: PO038447 Line: 2
8 ea	Part: 649.5013 Deflector Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 22032		Rev: D PO: PO038447 Line: 3
1 ea	Part: RBW6405G08832-3G-05 Locktube Clear Anodize per MIL-A-8625F, Type II, Class 1, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22036		Rev: PO: PO038447 Line: 7
1 ea	Part: RBW6405G08832-3G-07 Receiver Clear Anodize per MIL-A-8625F, Type II, Class 1, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22037		Rev: PO: PO038447 Line: 8
Made in Canada.			



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914187

Date: 28-Nov-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms	Ship Via
	OUR TRUCK

Quantity	Description
	CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>28/11/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>SP 17-11-28</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.